Name:_____Date:_____Period:_____

Quadratic Equation

Standard Form: $y=\boldsymbol{a}\,x^2+\boldsymbol{b}\,x+\boldsymbol{c}$ Vertex Form: $y=(x-\boldsymbol{h})^2+\boldsymbol{k}$

1. $y=x^2$

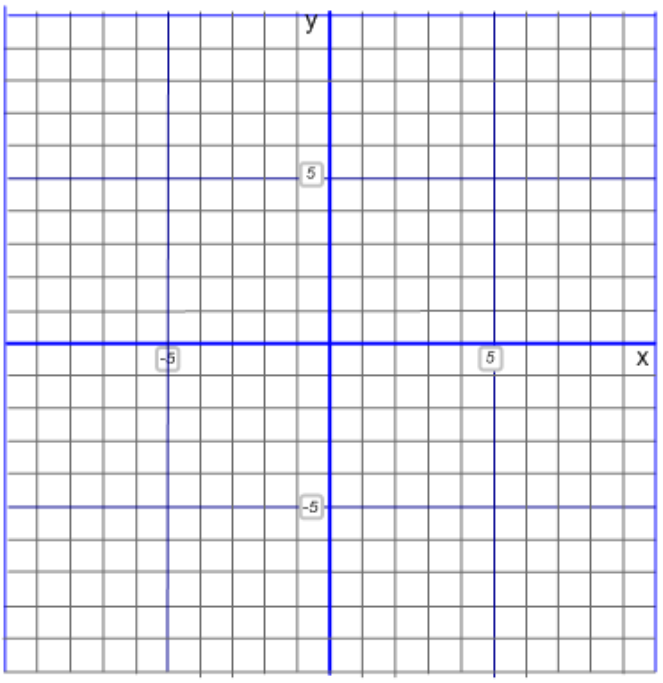
Standard Form: $a=1,\ b=0,\ c=0$

Vertex Form: $h=0,\ k=0$

Create a table of values **(Fill in blanks)**

x	$y=x^2$	(x,y)
-2	$y=(-2)^2=4$	$(-2,4)$
-1	$y=(-1)^2=1$	
0		
1		
2		

Plot the Points



2. $y=x^2-6$

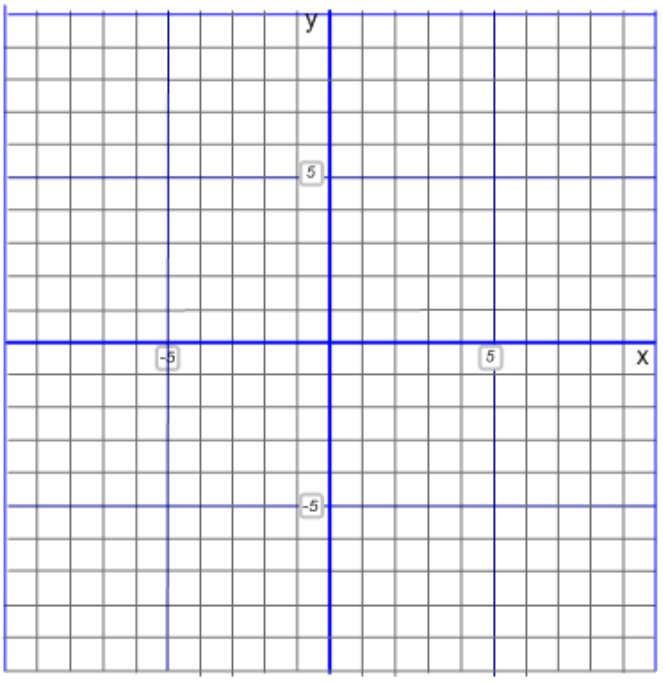
Standard Form: $a=1,\ b=0,\ c=-6$

Vertex Form: $h=0,\ k=-6$

Create a table of values **(Fill in blanks)**

x	$y=x^2-6$	(x,y)
-2	$y=(-2)^2-6=-2$	$(-2,-2)$
-1	$y=(-1)^2-6=-5$	
0		
1		
2		

Plot the Points



Use the Graphing Calculator to Check the Graph and Table Values.

2. $y=x^2+3$

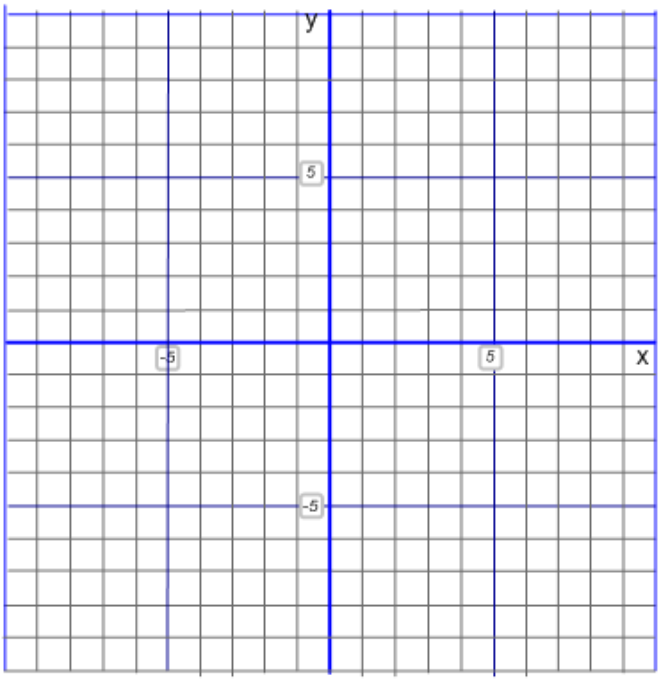
Standard Form: $a=1,\ b=0,\ c=3$

Vertex Form: $h=0,\ k=3$

Create a table of values

x	$y=x^2+3$	(x,y)
-2	$y=(-2)^2+3=1$	$(-2,1)$
-1		
0		
1		
2		

Plot the Points



2. $\boldsymbol{y=-x^2+3}$

Standard Form: $a=-1,\ b=0,\ c=3$

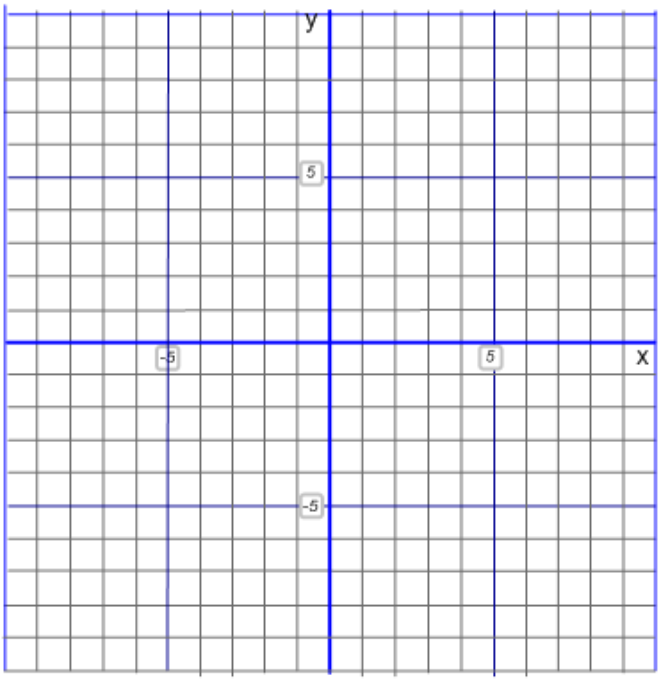
Vertex Form: $h=0,\ k=3$

$y=-(x-\mathbf{0})^2+\mathbf{3}$ Downward Facing Parabola

Create a table of values

x	$y=-x^2+3$	(x,y)
-2	$y=-(-2)^2+3=-1$	$(-2,-1)$
-1		
0		
1		
2		

Plot the Points



Use the Graphing Calculator to Check the Graph and Table Values.